

# ON SOME VICTORIAN LICHENS.

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IN my study of the Queensland Lichens it has been found necessary from time to time to refer to papers on American plants of the same order for original descriptions; and it has gradually been forced upon me that the relationship between American and Australian lichens is far closer than that between European and Australian lichens, and even more close than are the similarities and resemblances shown by Asiatic and Australian plants of this family. During my visit to Tasmania in 1892, to attend the meeting of the Australasian Association, I made a small collection of Tasmanian lichens—an account of which, unfortunately bristling with printer's errors, appears in the Transactions of the Royal Society of Tasmania for 1892. In working out these lichens the wonderful relationship to the plants published in American lists was again shown, and led me to review the subject as a whole; and this review was embodied in a paper read before the members of the Australasian Association at Adelaide, in September last. Having in my possession a small collection of Victorian lichens, obtained in exchange from the Rev. F. R. M. Wilson, of Kew, V., I determined to make a special examination of them with a view to show whether the same relationship to American forms would again be exhibited. Most of the Victorian lichens had been named by my correspondent, but on reference to the latest American works on lichenology, my labels had to be changed, as the greater number bore synonyms of plants whose names had been given long before by other workers. In the list attached corrections have been made, and the bibliography supplied.

It may perhaps be doubted by some of my hearers whether these lowly plants deserve so exhaustive a study; and it will perhaps not be out of place to give some reasons for the interest I take in them.

It is known that the flora of a country changes radically in the course of geologic ages; for instance, in the Miocene age, parts of Switzerland possessed a flora resembling that of Australia, the Molasse beds containing fossil remains of *Banksias*, *Hakeas*, *Sparganiums*, *Cinnamomums*, *Grevilleas*, *Persoonias*, and species of *Smilax*, etc., etc. Lowly plants like the lichens may outlive their loftier and nobler flowering allies. It is at least possible, so slow is the growth of many lichens and so unchangeable their character, that a lichen flora may outlive many changes in phanerogamic plants. The character of a lichen flora may therefore give a better clue to the source from whence an oceanic island or island continent was peopled with its floral wealth, than the forest trees of the island or region under consideration. Much interest has lately been evinced, and much speculation indulged in, concerning a former Antarctic continent. Wallace in his "Island Life," Hutton in his papers on "The Origin of the Fauna and Flora of New Zealand," Forbes in his writings on "Antarctica," and lately our old colleague, Mr. C. Hedley, in his pamphlet, "The Relation of the Fauna and Flora of Australia to that of New Zealand," have dealt most cleverly and exhaustively with various phases of the subject. So far as the lichens of Australia can give their testimony they offer a greater proof of an old time and intimate connection with America than with the nearer and more island-joined continent of Asia; and, though these are mere fractured links in what may yet be a complete chain of evidence, the discovery of the fossil bones of a peccary in Queensland by Mr. C. W. De Vis, and the finding of fossil marsupial remains in Patagonia of an Australian type, are also worth their place in a discussion on the subject.

More than three-fourths of the lichens in the list appended are found also in America, and two others belong to the genus *Acolium*, a family of tropical American habitat. A species of this family was first found in Queensland among some lichens

gathered by the late C. H. Hartmann, kindly presented to me by Mr. Henry Tryon.

ORDER I.—Collemaeæ, Mull. Arg., Lich. Genève, p. 80.

Tribe I.—Lichineæ (*Lichinei*, Nyl. Syn. p. 88, pro p.)

1. *Ephebe pubescens*, Fr. s. *Stigonema ephებიoides*, Wilson, Trans. Linn. Soc. 1890. On rock, summit of Mount Macedon, 3-4,000 feet above sea level.

Tribe II.—Collemaeæ, *Körb.* Parerg. p. 408.

2. *Leptogium tremelloides*, Fr. v. *marginellum*, Nyl. s. *L. philorheuma*, Wils., *L. sinuatum*, Wils. Vic. Nat. Vol. IV. No. 6, p. 86; Roy. Soc. Vic., Nov. 10th, 1892. On mossy rocks by streams near Melbourne.

3. *Leptogium tremelloides* v. *isidiosa*, Mull. Arg. s. *L. limbatum*, Wils. Vic. Nat. Vol. VI. No. 4, p. 63. On *Prostanthera*, Mount Macedon.

4. *Synechoblastus laevis*, Mull. Arg. s. *Collema senecionis*, Wils. Vic. Nat. Vol. VI. No. 4, p. 62. On *Senecio Bedfordii*, near Melbourne.

5. *Synechoblastus texanus*, Mull. Arg. s. *Collema atrum*, Wils. Vic. Nat. Vol. VI. No. 4, p. 62. On calcareous earth and rocks by the seaside, Victoria.

6. *Synechoblastus Robillardii*, Mull. Arg. s. *Collema quadrilocularis*, Wils. Vic. Nat. Vol. VI. No. 4, p. 61. On rocks, Mount Macedon.

7. *Lempholemma myriococcum*, Th. Fr. s. *Synalissa cancellata*, Wils. Proc. Roy. Soc. Vic., Nov. 10th, 1892. On mossy rock, Mount Macedon, at 3-4,000 feet.

ORDER II.—Epiconiaceæ, Mull. Arg. Lich. Genève, p. 18.

Tribe III.—Calicieæ, Fries. Lich. Europ. p. 6

8. *Calcium pachypus*, Mull. Arg. s. *C. flavidum*, Wils. Vic. Nat. Vol. VI. No. 4, p. 64. Gippsland.

9. *Acolium parasema*, Mull. Arg. s. *Trachylia viridilocularis*, Wils. Vic. Nat. Vol. VI. p. 66. Kew.

10. *Acolium subocellatum*, Mull. Arg. s. *Trachylia lecanorina*, Wils. Vic. Nat. Vol. VI, No. 4, p. 66. On old rails, Ararat.

ORDER III.—Discocarpeæ, Mull. Arg. Lich. Genève, p. 18.

Tribe IV.—Ramalineæ, Mull. Arg. Lich. Genève, p. 26.

11. *Ramalina fraxinea* v. *platyna*, *Nyl.* s. *R. brevis*, Wilson. *Vic. Nat.* Vol. VI, No. 4, p. 69. On bushes, Warrnambool.

12. *R. pollinaria*, *Ach.* s. *R. unilateralis*, Wilson. *Vic. Nat.* Vol. VI, No. 4, p. 69. On twigs of *Bursaria spinosa*, Victoria.

13. *R. polymorpha* v. *empletans*, *Ach.* s. *R. tenellula*, Wilson, *in lit.*

14. *R. inflata* v. *gracilis*, *Mull. Arg.* s. *R. horizontalis*, Wilson, *in lit.*

Tribe V.—*Parmeliæ*, *Mull. Arg. Lich. Genève*, p. 31.

15. *Stictina intricata* v. *Thouarsii*, *Nyl.* s. *S. pustulosa*, Wilson. *Vic. Nat.* Vol. VI, No. 4, p. 60. On bark of *Melaleuca*, Gippsland.

16. *S. crocata* f. *esorediata*. *Mull. Arg.* No. 236, Wilson. Mount Macedon.

17. *S. Mougeotina* v. *aurigera*, *Nyl.* No. 247 b., Wilson.

18. *Sticta dichotomoides*, *Nyl.* s. *S. stipitata*, Wilson. On fallen fern-tree, Mount Macedon. *Proc. Roy. Soc. Qd.*, Vol. VI, Part 1, 1889.

19. *S. Shirleyana*, *Mull. Arg.* s. *S. stipitata*, Wils.; juvenile form. On fallen fern-tree, Mount Macedon. *Proc. Roy. Soc. Qd.*, Vol. VI, Part 1, 1889.

20. *Parmelia tinctorum*, *Nyl.* s. *P. splendida*, Wilson, *in lit.*

21. *P. saxatilis* v. *signifera*, *Mull. Arg.* s. *P. tenuirima*, Wilson. Mount Macedon, at 4,000 feet. *Vic. Nat.* Vol. IV, No. 6, p. 87.

22. *Xanthoria parietina* v. *spinulosa*, *Krph.* s. *Theloschistes velifer*, Wilson. *Vic. Nat.* Vol. VI, No. 4, p. 69. On *Hymen-anthera Banksii* by the Yarra, near Melbourne.

23. *Physcia stellaris* v. *acrita*, *Nyl.*, Nos. 275 and 275 (b), Wilson. Botanical Gardens, Geelong.

Tribe VI.—*Psoromeæ* (*Psoromei*, *Nyl. Syn.* II. 21).

24. *Psoroma sphinetrinum*, *Nyl.* s. *P. contortulum*, Wilson. No. 300. *Vic. Nat.* Vol. VI, p. 61.

Tribe VII.—*Parmeliellæ* (*Pannariæ*, *Nyl. Syn.* II. 27).

25. *Parmeliella caerulescens*, *Mull. Arg.* s. *Pannaria molydodes*, Wilson. *Vic. Nat.* Vol. VI, No. 4, p. 61. On mossy trees, Warburton.

25a. *Coccocarpia pellita* v. *incisa*, *Mull. Arg. s. Obryzum myriopus*, Wilson. Vic. Nat. Vol. VI. p. 60.

Tribe VIII.—Psoreæ, *Mull. Arg. Lich. Genève*, p. 40.

26. *Psora dactylophylla*, *Mull. Arg. s. Phyllis melacarpa*, Wilson. Vic. Nat. Vol. VI. No. 4, p. 68. On tree trunks and decaying logs in sub-alpine localities.

27. *Thalloidima australiense*, *Mull. Arg. s. Pycnothelia papillaris*, Wilson. Vic. Nat. Vol. IV. No. 6, p. 86. On sandy cliff, Brighton.

Tribe IX.—Lecanoreæ, *Mull. Arg., Bot. Socot.*, p. 359.

28.—*Rinodina australiensis*, *Mull. Arg.* On *Banksia serrata*, Cheltenham, Wilson.

29. *Diploschistes actinostoma*, *Zahl.* No. 511, Wilson. On basaltic rocks, Little River.

30. *D. scruposus*, *Norm.* No. 499, Wilson. On slates, Glenmaggie.

31. *Phlyctella Wilsoni* v. *sparsa*, *Mull. Arg.* No. 830, Wilson. Mount Macedon.

Tribe X.—Lecideeæ, *Mull. Arg. Lich. Genève*, p. 50.

32. *Buellia myriocarpa*, *Mudd. s. Trachylia exigua*, Wilson. On old rails near Melbourne.

Tribe XI.—Graphideæ, *Mull. Arg. Graph. Feé*, p. 13.

33. *Opegraphia varia* v. *heterocarpa*, *Mull. Arg.* No. 858 (b.) On *Banksia serrata*, near Melbourne.

34. *Phaeographis australiensis*, *Mull. Arg.*, Wilson, Gippsland.

35. *Graphis assimilis*, *Nyl.*, Wilson. Gippsland.

36. *G. tenella*, *Ach.*, Wilson. Gippsland.

37. *Arthonia dispersa*, *Nyl.*, Wilson. On elm-trees, Geelong.

38. *Chiodecton grossum*, *Mull. Arg.*, s. *C. encephalodes*, Wilson. On *Eugenia Smithii*, Gippsland, Wilson. Vic. Nat. Vol. VI. No. 4, p. 61.